



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/945,508	08/30/2001	Kei-yu Ko	303.696US1	2656

7590 06/04/2002

Schwegman, Lundberg, Woessner & Kluth, P.A.
Attn: Daniel J. Kluth
P.O. Box 2938
Minneapolis, MN 55402

EXAMINER

UMEZ ERONINI, LYNETTE T

ART UNIT	PAPER NUMBER
----------	--------------

1765

DATE MAILED: 06/04/2002

4

Please find below and/or attached an Office communication concerning this application or proceeding.

21-4

Office Action Summary	Application No.		Applicant(s)	
	09/945,508		KEI-YU-KO	
	Examiner		Art Unit	
	Lynette T. Umez-Eronini		1765	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on _____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-64 is/are pending in the application.
- 4a) Of the above claim(s) 21-64 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of claims 1-20 in Paper No. 4 is acknowledged.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Chu et al. (US 5,908,320).

Chu teaches an etchant gas composition comprising:

an inert gas (same as carrier gas), (column 6, lines 44-48);

C₄F₈ (example of one of more C₂+F gases), (column 6, lines 55);

CH₂F₂ (column 6, lines 55); and

a gas selected from the group consisting of CHF₃, CF₄, and mixtures thereof (column 6, line 44-45).

4. Claims 6-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Chu ('320).

Chu teaches an etchant gas includes Ne (carrier gas), CHF₃, and one or more of C₄F₈ and CO (column 5, lines 42-45). The etchant gases may contain components other

Art Unit: 1765

than CO and C₄F₈, e.g. CH₂F₂ (column 6, lines 53-56). Hence, the aforementioned reads on an etchant gas composition consisting essentially of: a carrier gas; one or more C₂+F gases; CH₂F₂; and CHF₃.

5. Claims 11-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Halman (US 5,658,425).

Halman teaches a fluoride containing etching gas, such as CF₄, CHF₃, C₂F₆, CH₂F₂, SF₆, other Freons and mixtures thereof and also a carrier gas or mixtures thereof (Abstract and column 2, lines 47-50). The mixture of the fluoride containing gas encompasses applicants one or more C₂+F gases, CH₂F₂, and CF₄. Hence, the aforementioned reads on an etchant gas, consisting essentially of: a carrier gas; one or more C₂+F gases; CH₂F₂; and CF₄.

6. Claims 16-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Halman (US '425).

Halman teaches a fluoride containing etching gas, such as CF₄, CHF₃, C₂F₆, CH₂F₂, SF₆, other Freons and mixtures thereof and also a carrier gas or mixtures thereof (Abstract). The mixture of the fluoride containing gas encompasses applicants one or more C₂+F gases, CH₂F₂, CHF₃, and CF₄. Hence, the aforementioned reads on an etchant gas, consisting essentially of: a carrier gas; one or more C₂+F gases; CH₂F₂; CHF₃, and CF₄.

Art Unit: 1765

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lynette T. Umez-Eronini whose telephone number is 703-306-9074. The examiner can normally be reached on Second Friday.

ltue
May 31, 2002



BENJAMIN L. UTECH
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700